OCEAN ACIDIFICATION INTERNSHIP

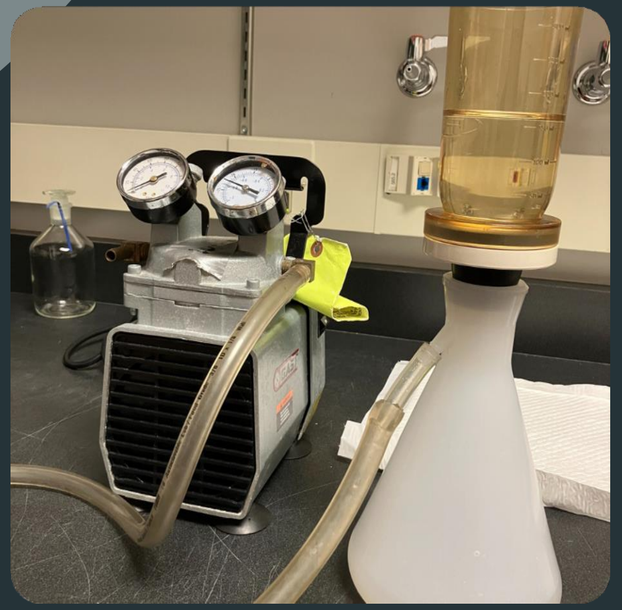
Karina Lai

ABOUT ME

- Incoming second year
- Majoring in marine biology with a minor in oceanography

What is WOAC and NANOOS NVS?

Weeks 1-3



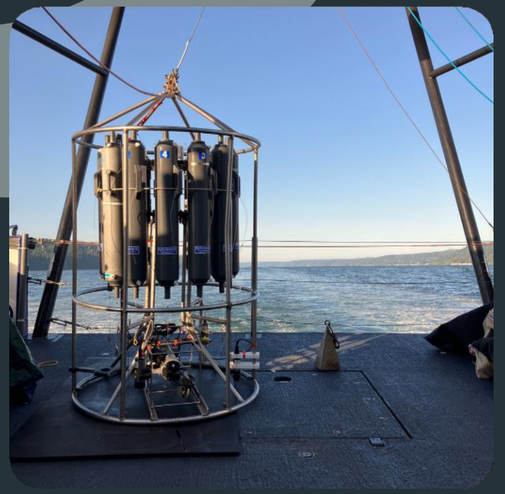
Filtering seawater

```
#reads in PMEL spreadsheet into 2 dataframes
data = pd.read_csv("/Users/Karina/Documents/Python/NCEI_Files/CAB1023_data.csv
with pd.ExcelFile("/Users/Karina/Documents/Python/SalishCruise_Template_labupc
    readme = pd.read_excel(xls, "ReadMe")
 #brings in all the columns that are the same between the PMEL spreadsheet and
data3 = data[['CRUISE_ID','DATE_UTC','TIME_UTC','DATE_LOCAL','TIME_LOCAL','LAT
              'NISKIN_NO','CTDPRS_DBAR','CTDTMP_DEG_C_ITS90','CTDTMP_FLAG_W','
              'CTDOXY_FLAG_W','OXYGEN_MG_L_1','OXYGEN_MG_L_2','OXYGEN_MG_L_3',
              'NITRATE_UMOL_L','NITRITE_UMOL_L','AMMONIUM_UMOL_L','PHOSPHATE_U
              'TA_UMOL_KG','TA_FLAG_W','DIC_UMOL_KG','DIC_FLAG_W']]
#adds in the new columns that are present in the NVS spreadsheet but not PMEL
data3.insert(loc=0,column='record no',value = '')
data3.insert(loc=6,column='LATITUDE_DEG',value = '')
data3.insert(loc=7,column='LONGITUDE_DEG',value = '')
data3.insert(loc=12,column='NISKIN_NO_FLAG_W',value = '')
data3.insert(loc=14,column='DEPTH (M)',value = '')
data3.insert(loc=16,column='CTDTMP2_DEC_C_ITS90',value = '')
data3.insert(loc=18,column='CTD/TEMP_COMMENTS',value = '')
data3.insert(loc=20,column='CTDSAL2_PSS78',value = '')
data3.insert(loc=22,column='CTD/SAL_COMMENTS',value = '')
data3.insert(loc=24,column='SIGMATHETA2_KG_M3',value = '')
data3.insert(loc=26,column='CTDOXY_MG_L_2',value = '')
data3.insert(loc=27,column='CTDOXY_MG_L_AVG',value = '')
data3.insert(loc=29,column='CTD/O2_COMMENTS',value = '')
data3.insert(loc=33,column='OXYGEN_avg_mg_L',value = '')
data3.insert(loc=36,column='OXYGEN COMMENTS',value = '')
data3.insert(loc=37,column='CTD_PH_NBS',value = '')
data3.insert(loc=38,column='SALINITY_PSS78',value = '')
data3.insert(loc=39,column='SALINITY_PSS78_2',value = '')
data3.insert(loc=40,column='SALINITY_FLAG_W',value = '')
data3.insert(loc=41,column='Nutrient lab temperature',value = '')
data3.insert(loc=48,column='CTD FLU (mg/m3)',value = '')
```

Coding for the first time!

Gathering and packing cruise materials

Week 4-5

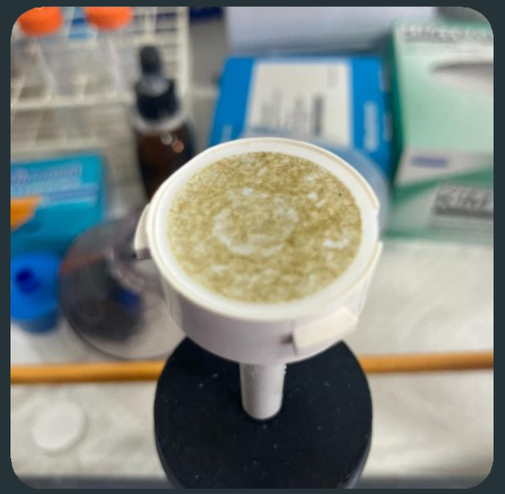


01

CTD deployed and retrieved

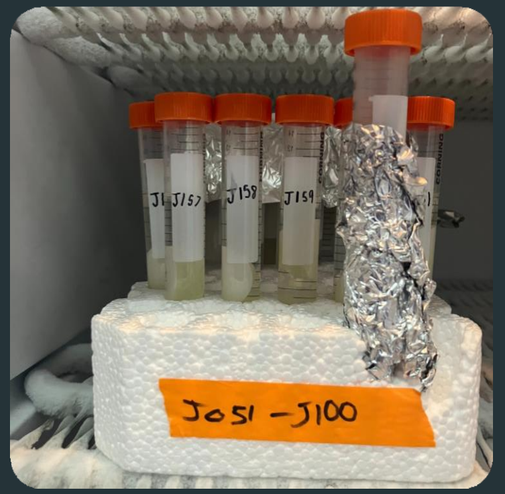
02

Collected water samples



03

Filtered out phytoplankton



04

Prepared samples

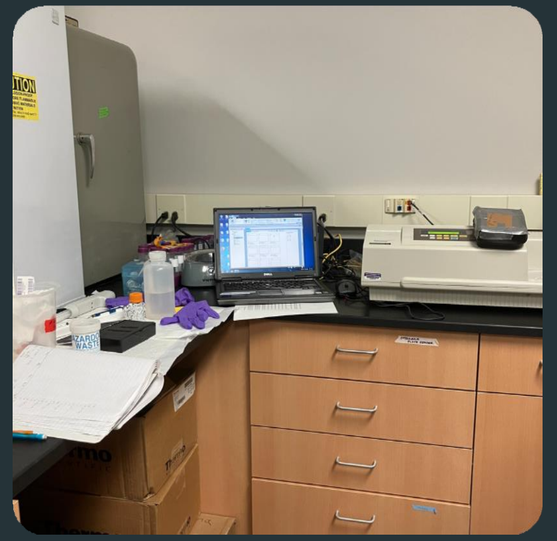
	Vol. Filt. (L)	Vol. Ext. (L)	Dil'n factor	Fo	Fa	L v
sh acid	0.275	0.01	1.00	95232.79	60247.3	26
d acid	0.275	0.01	1.00	104770.72	68319.14	26
sh acid	0.275	0.01	1.00	95689.58	58530.91	26
d acid	0.275	0.01	1.00	95768.8	67806.38	26
sh acid	0.275	0.01	1.00	264747.25	148277.97	26
d acid	0.275	0.01	1.00	275602.5	170097.98	26
sh acid	0.275	0.01	1.00	268609.47	148044.38	26
d acid	0.275	0.01	1.00	267287.84	166055.97	26
sh acid	0.275	0.01	1.00	495485.16	275303.88	26
d acid	0.275	0.01	1.00	506734.06	295965.91	26
	0.275	0.01	1.00	508128.81	289672.47	26
	0.275	0.01	1.00	844285.25	474970.56	26
	0.275	0.01	1.00	732011.81	396169.81	26
	0.275	0.01	1.00	657460.75	356933.47	26
	0.275	0.01	1.00	658635.19	362366.97	26
	0.275	0.01	1.00	520494.28	271717.81	26
	0.275	0.01	1.00	506745.47	271741.34	26
	0.275	0.01	1.00	130949.32	91522.4	28
	0.275	0.01	1.00	262446.72	163293.09	28
	0.275	0.01	1.00	482389.78	286842.97	28
	0.275	0.01	1.00	637457.56	373562.88	28
	0.275	0.01	1.00	596271.5	353296.59	28
	0.275	0.01	1.00	1279617.12	727939.94	2

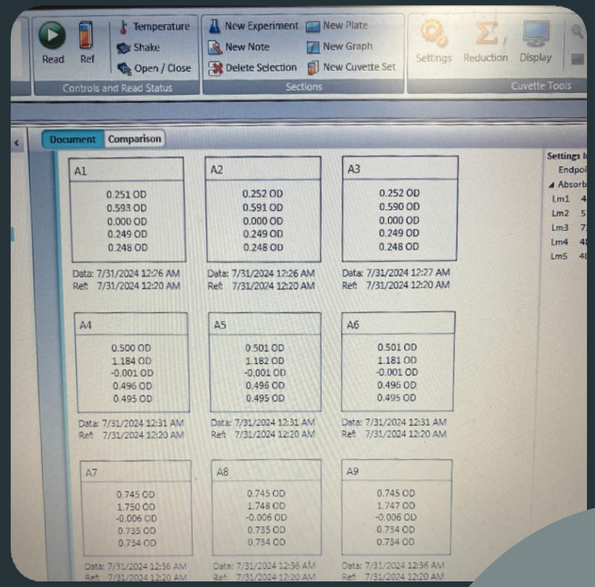
05

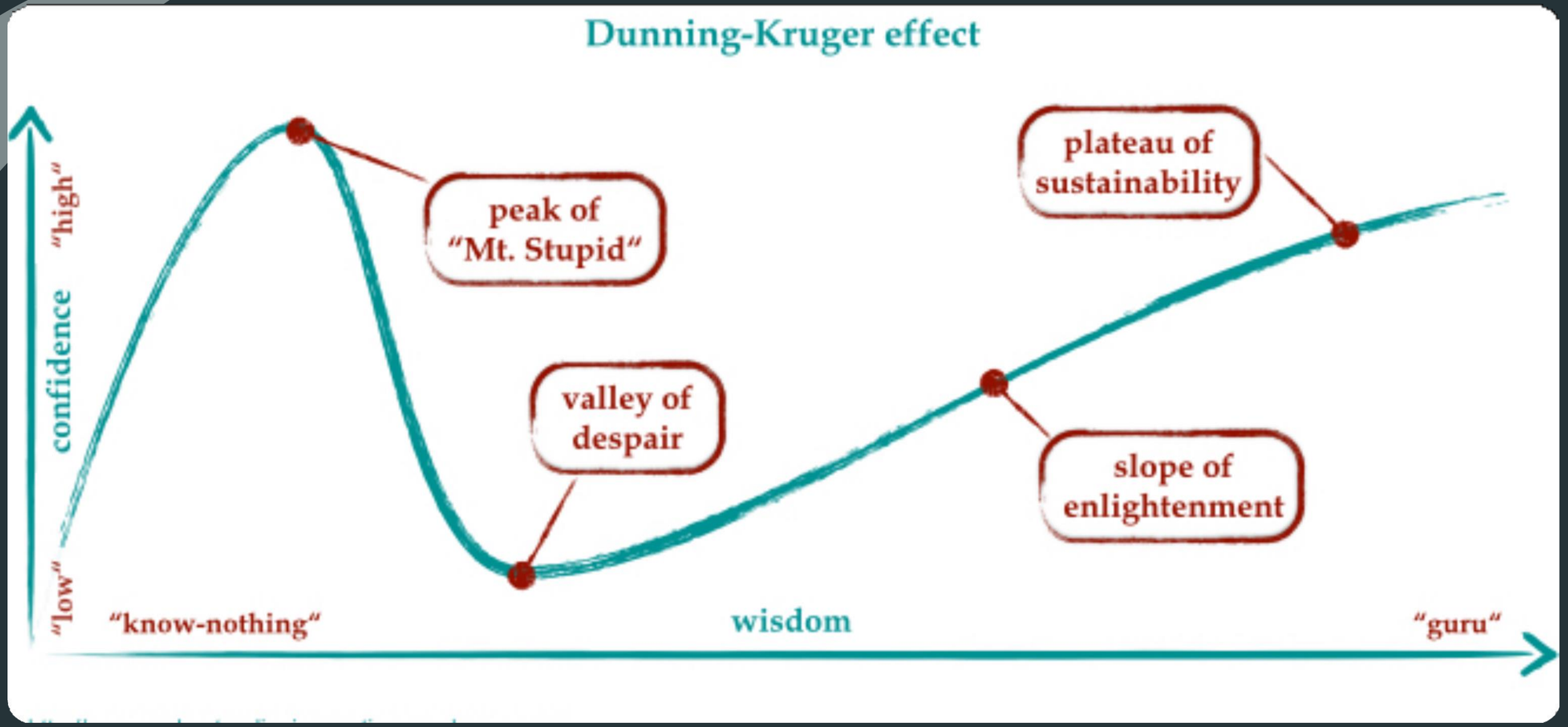
Analyzed using fluorometer


UW_MARINEBIOLOGY
Posts
uw_marinebiology
University of Washington

Week 6-9




Read
Ref
Temperature
Shake
Open / Close
Controls and Read Status
New Experiment
New Plate
New Note
New Graph
Delete Selection
New Cuvette Set
Sections
Settings
Reduction
Display
Cuvette Tools
Document
Comparison
A1
0.251 OD
0.593 OD
0.000 OD
0.249 OD
0.248 OD
Data: 7/31/2024 12:26 AM
Ref: 7/31/2024 12:20 AM
A2
0.252 OD
0.591 OD
0.000 OD
0.249 OD
0.248 OD
Data: 7/31/2024 12:26 AM
Ref: 7/31/2024 12:20 AM
A3
0.252 OD
0.590 OD
0.000 OD
0.249 OD
0.248 OD
Data: 7/31/2024 12:27 AM
Ref: 7/31/2024 12:20 AM
A4
0.500 OD
1.184 OD
-0.001 OD
0.496 OD
0.495 OD
Data: 7/31/2024 12:31 AM
Ref: 7/31/2024 12:20 AM
A5
0.501 OD
1.182 OD
-0.001 OD
0.496 OD
0.495 OD
Data: 7/31/2024 12:31 AM
Ref: 7/31/2024 12:20 AM
A6
0.501 OD
1.181 OD
-0.001 OD
0.496 OD
0.495 OD
Data: 7/31/2024 12:31 AM
Ref: 7/31/2024 12:20 AM
A7
0.745 OD
1.750 OD
-0.006 OD
0.735 OD
0.734 OD
A8
0.745 OD
1.748 OD
-0.006 OD
0.735 OD
0.734 OD
A9
0.745 OD
1.747 OD
-0.006 OD
0.734 OD
0.734 OD



Week 1-3

Week 4-5

Week 6-9

What I learned

- Technical skills
- Lab work, field work, data analysis
- Working independently
- Imposter syndrome and making mistakes

Thank you!

Special acknowledgments to: Anna Boyar, Jan Newton, Jonathan Shen, Rachel Wold, Lissan Tibebe, Anastasia Ramey, EarthLab Cohort 3, Crew and science party on the WOAC cruise